

Date: Thursday, 19/03/2009 11:02:12 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : 205 BEARPAW INSTALLATION KIT (48")
Job Number : 46573	
Estimate Number : 12283	
P.O. Number :	Part Number : D205564011
This Issue : 19/03/2009 S.O. No. :	Drawing Number : D2521
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : MACHINED PARTS	Drawing Revision : J
Previous Run : 45313	Material :
Written By :	Due Date : 15/04/2009 Qty: 10 Um: Each
Checked & Approved By : <u>JUL 09.03.19</u>	
Comment : Est F 00.01.20 Changed pick list, MPP 2019, CHG006 EC Est Rev:G 06-08-28 As per Rev E JLM Est Rev:H 08-01-11 Added Step #2 JLM Verified BY:EC Est Rev:I 08-10-01 New Manufacturing Method JLM Verified By:EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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for JLD 09/04/16

**Comment:** DOCUMENT CONTROL

Photocopy blue file and type labels per PPP D205-564-011 CHG008

S 09/04/16

2.0	MFG ENGINEERING	MFG ENGINEERING
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**Comment:** MFG ENGINEERING

Program Batch Number

for 09.03.25.

3.0	MUHMWB10	UHMW 1" Black
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**Comment:** Qty.: 8.4000 sf(s)/Unit Total: 84.0000 sf(s)

blank: 19.500" x 48.0" x 1.00" thick (+0.030/-0.000) per DSK086-6

Material: Black UHMW 1"

(MUHMWB10)

Batch: 111354 *B9-4-9*

20

4.0	WATER JET	FLOW WATER JET
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**Comment:** FLOW WATER JET


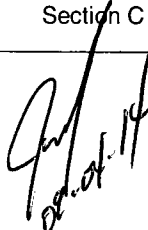
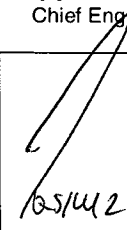
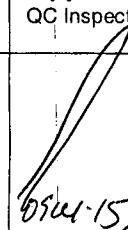
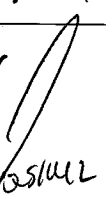

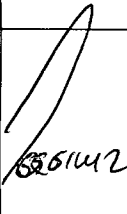
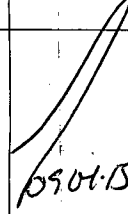
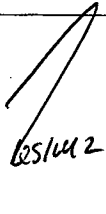
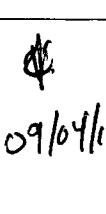
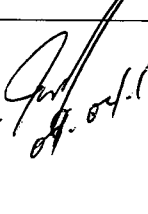
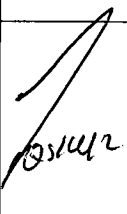
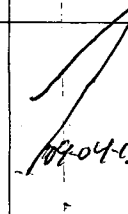
Cut Blank as per D2521 blank file

B9-4-9

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-564-011 PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: D Date: 09/04/20
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>46573</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09/04/13	5.0	1 part scrap The mechanic from HAAS had not advise operator that he changed the Z origin of the machine. SO ALL the dimensions on 1 side are too deep by .052" R.C. lack of communication.		SCRAP / DESTROY, no replace.	B.A 09/04/13			
						↓		
09/04/15	5.0	1 part scrap Machine started on wrong program, machine crashed. Broke part & bit. R.C. - operator error		SCRAP : DESTROY				

NOTE: Date & initial all entries

Date: Thursday, 19/03/2009 11:02:12 AM
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 205 BEARPAW INSTALLATION KIT (48")

Job Number: 46573

Part Number: D205564011

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

HAAS1

HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

(2) Bearpaws Make (1) kit

1-Inspect material for defects or damage prior to machining

2-Machine as per Folio and Dwg D2521 Identify as D2521

3-Deburr

N.A 09/04/13

*PA.
F. Prews
Pages*

6.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

N.A 09/04/13

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

JL 09/04/15 (18)

8.0

D2182B

Rubber Cushion



Comment: Qty.: 3.7000 f(s)/Unit Total: ~~37.0000~~ f(s)

Pick: Packing Kit

Qty Part Number Description Batch

8 D2182B055 Rubber Cushion

*333
measured 59/4/16
45405*

SS 09/04/16 (x9)

9.0

D2274

Radius Block



Comment: Qty.: 20.0000 Each(s)/Unit Total: ~~200.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

20 D2274 Radius Block

44547

SS 09/04/16 (x9)

10.0

D2529

Washer



Comment: Qty.: 20.0000 Each(s)/Unit Total: ~~200.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

20 D2529 Washer

45388

SS 09/04/16 (x9)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 19/03/2009 11:02:12 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 205 BEARPAW INSTALLATION KIT (48")

Job Number: 46573

Part Number: D205564011

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

D2947

Clamp



Comment: Qty.: 8.0000 Each(s)/Unit Total: ~~80.0000~~ Each(s)

Clamp

Pick:

Qty Part Number Description Batch

8 D2947

Clamp

44049

SS 09/04/16 (x9)

12.0

D3544041

Clamp



Comment: Qty.: 4.0000 Each(s)/Unit Total: ~~40.0000~~ Each(s)

CLAMP

Batch:

B44653 x23 46651 x13

SS 09/04/16 (x9)

13.0

AN413A

Bolt



Comment: Qty.: 8.0000 Each(s)/Unit Total: ~~80.0000~~ Each(s)

Bolt

Batch:

M110552 x24 M110731 x48

SS 09/04/16 (x9)

14.0

AN415A

Bolt



Comment: Qty.: 20.0000 Each(s)/Unit Total: ~~200.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

20 AN4-15A

Bolt

M110399

SS 09/04/16 (x9)

15.0

AN960JD416

Washer



Comment: Qty.: 20.0000 Each(s)/Unit Total: ~~200.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

20 AN960JD416

Washer

M110363

SS 09/04/16 (x9)

16.0

MS21042L4

Nut



Comment: Qty.: 20.0000 Each(s)/Unit Total: ~~200.0000~~ Each(s)

Nut

Batch:

M109282

SS 09/04/16 (x9)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Job Number: 46573

Part Number: D205564011

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

809/04/16 (19)

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 29 Rec 9/4/16

(9)

19.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/04/16

Job Completion



MF 09-04-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 46513
Description: Bearpaw		Part Number: D2521
Inspection Dwg: D2521 Rev: J		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension			Actual Dimension	Accept	Reject	Method of Inspection	Comments
Dim	Min	Max					
A	0.260	0.266	0.260	✓			
B	0.90	0.96	0.925	✓			
C	0.27	0.330	0.310	✓			
D	0.470	0.530	0.500	✓			
E	21.740	21.760	21.740	✓			
F	0.72	0.780	0.750	✓			
G	0.35	0.410	0.381	✓			
H	11.490	11.570	11.500	✓			
I	3.41	3.47	3.44	✓			
J	11.790	11.810	11.800	✓			
K	9.47	9.53	9.50	✓			
L	7.190	7.210	7.200	✓			
M	6.910	6.970	6.940	✓			
N	44.47	44.530	44.50	✓			
O	6.590	6.650	6.620	✓			
P	0.940	0.980	0.955	✓			
Q	18.97	19.03	19.000	✓			
R	0.350	0.410	0.380	✓			
S	0.740	0.780	0.754	✓			
T	0.240	0.280	0.253	✓			
U	0.370	0.410	0.380	✓			
V	0.740	0.780	0.750	✓			
W	0.740	0.780	0.750	✓			

Measured by: J.A	Audited by: J.L	Prototype Approval:	N/A
Date: 09/04/13	Date: 09/04/15	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O D205-564-011 & D430-688-011	KJ/RF	
B	05.06.15	Dimensions and tolerances changed	KJ/RF	
C	06.08.31	Dimensions updated per D2521 Rev. J	KJ/JLM	



DESIGN #	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED #	DRAWING NO. D2521	REV. J SHEET 1 OF 3
DATE 06.07.28	TITLE 205 BEARPAW		SCALE NTS
A	95.11.28	NEW ISSUE	
B	96.01.11	SHOW BENDING MOVE HOLES	
C	96.01.29	ADJUST HOLE LOCATION FOR TOOLING	
D	96.05.14	ADJUSTED BEAR PAW THICKNESS	
E	96.12.18	43.500 WAS 46.750	
F	97.05.07	ADDED REAR POCKET, MOVED HOLES	
G	98.08.06	ADD C'BORE AND CHAMFER EDGES	
H	03.01.30	CHANGE GEOMETRY FOR RUN-ON LDG.	
I	05.05.20	REMOVE BEND; CHANGE TOLERANCES	
J	06.07.28	CHANGE FOR FLOAT SKIDTUBE	

SHOP COPY
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. H6573
RELEASED

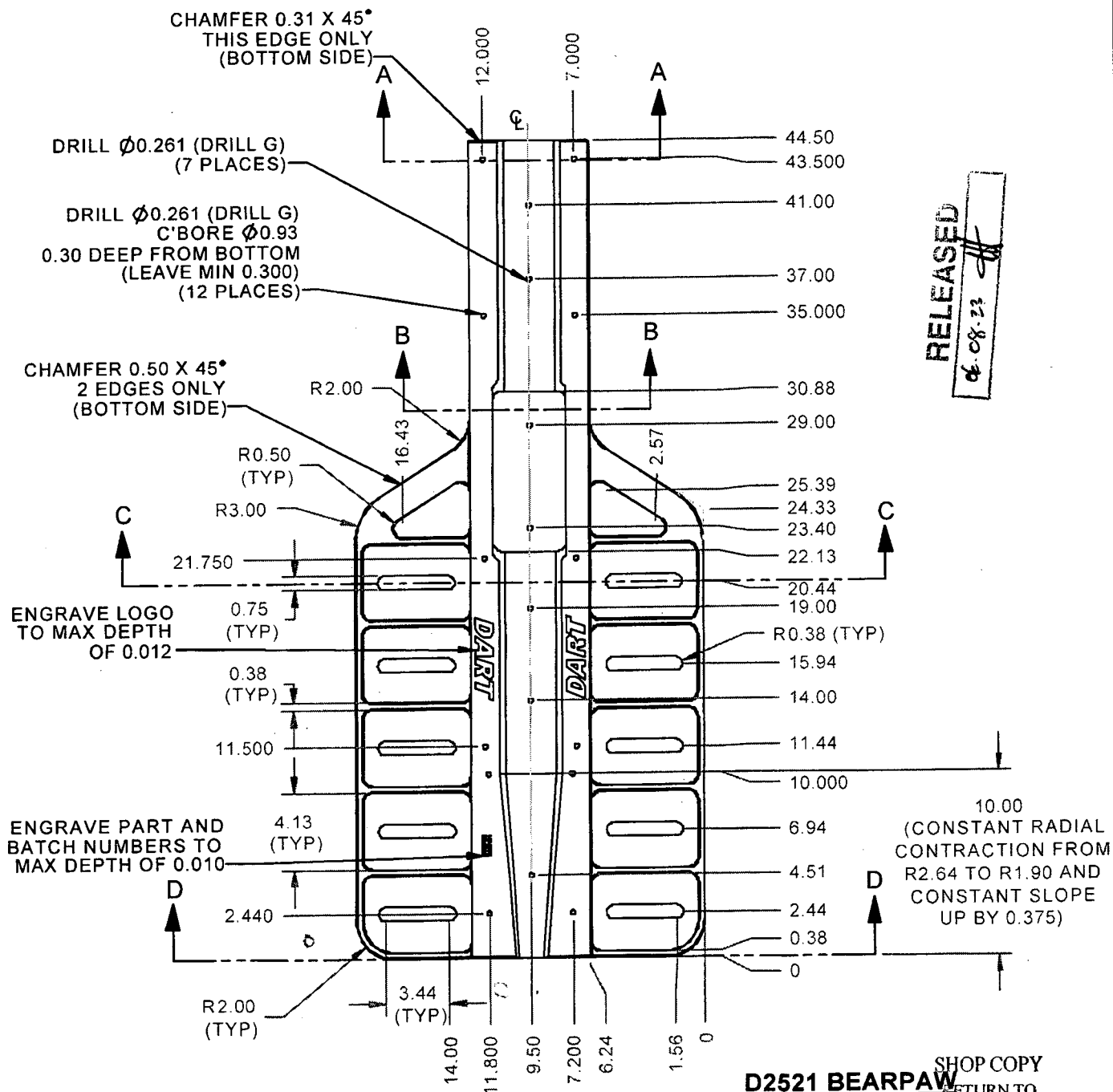
06 08.23 #

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DART

DESIGN	DRAWN BY	DART AEROSPACE LTD	
		HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. J
		D2521	SHEET 2 OF 3
DATE	TITLE		SCALE
06.07.28	205 BEARPAW		1:8

**NOTES:**

- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK (MACHINE TO 0.950)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.030
- 6) PART IS SYMMETRIC ABOUT ϕ

D2521 BEARPAW

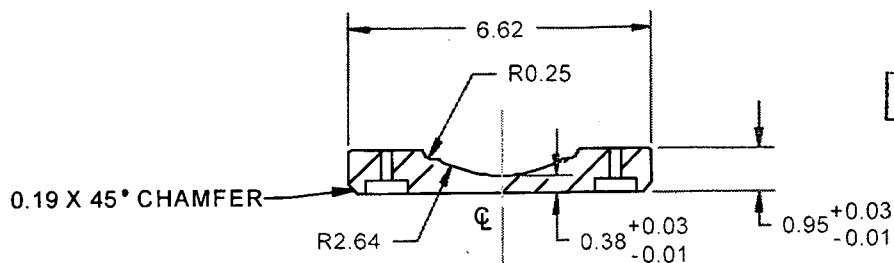
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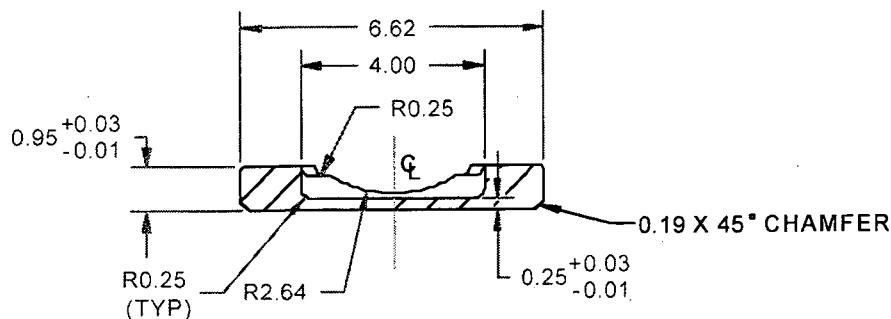
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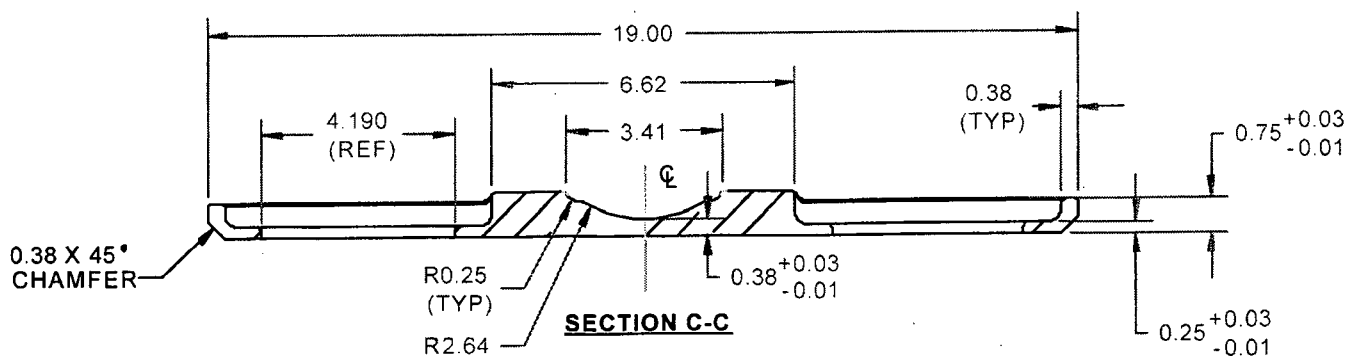
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	C.B.	HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. J
CP		D2521	SHEET 3 OF 3
DATE		TITLE	SCALE
06.07.28		205 BEARPAW	1:4



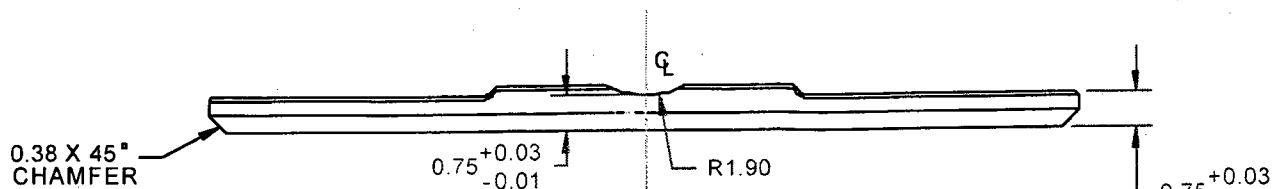
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

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